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ABSTRACT

The document contains abstracts and major findings of research conducted by the University of Kansas Institute for Research in Learning Disabilities on the learning disabled (LD) adolescent and young adult in both school and nonschool settings. Major findings are presented in three sections--cognitive/academic characteristics and setting demands, intervention, and social skills. Provided for each section are: a brief statement of issues; abstracts with each study's purpose, methodology, and major findings; and a statement of implications. Noted among conclusions are that the quality of life of LD young adults appears to be lower or more limited than a representative group of young adults, that the demands of the regular class setting must be used to define the interventions used for LD students, and that LD adolescents are not notably different from other adolescents when social behaviors are measured quantitatively. A complete list of the 53 research reports and 10 research monographs is included. (SB)

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INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES
The University of Kansas
Lawrence, Kansas, 66045
Emphasis on Adolescents and Young Adults

MAJOR RESEARCH FINDINGS OF THE UNIVERSITY OF KANSAS INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

Frances L. Clark, Editor

Research Report No. 31
October, 1981

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The University of Kansas Institute for Research in Learning Disabilities is supported by a contract (#300-77-0494) with the Bureau of Education for the Handicapped, Department of Health, Education, and Welfare, U. S. Office of Education, through Title VI-G of Public Law 91-230. The University of Kansas Institute, a joint research effort involving the Department of Special Education and the Bureau of Child Research, has specified the learning disabled adolescent and young adult as the target population. The major responsibility of the Institute is to develop effective means of identifying learning disabled populations at the secondary level and to construct interventions that will have an effect upon school performance and life adjustment. Many areas of research have been designed to study the problems of LD adolescents and young adults in both school and non-school settings (e.g., employment, juvenile justice, military, etc.)

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COOPERATING AGENCIES

Were it not for the cooperation of many agencies in the public and private sector, the research efforts of The University of Kansas Institute for Research in Learning Disabilities could not be conducted. The Institute has maintained an on-going dialogue with participating school districts and agencies to give focus to the research questions and issues that we address as an Institute. We see this dialogue as a means of reducing the gap between research and practice. This communication also allows us to design procedures that: (a) protect the LD adolescent or young adult, (b) disrupt the on-going program as little as possible, and (c) provide appropriate research data.

The majority of our research to this time has been conducted in public school settings in both Kansas and Missouri. School districts in Kansas which have or currently are participating in various studies include: Unified School District USD 384, Blue Valley; USD 500, Kansas City, Kansas; USD 469, Lansing; USD 497, Lawrence; USD 453, Leavenworth; USD 233, Olathe; USD 305, Salina; USD 450, Shawnee Heights; USD 512, Shawnee Mission; USD 464, Tonganoxie; USD 202, Turner; and USD 501, Topeka. Studies are also being conducted in several school districts in Missouri, including Center School District, Kansas City, Missouri: the New School for Human Education, Kansas City, Missouri; the Kansas City, Missouri School District; the Raytown, Missouri School District; and the School District of St. Joseph, St. Joseph, Missouri. Other participating districts include: Delta County, Colorado School District; Montrose County, Colorado School District; Elkhart Community Schools, Elkhart, Indiana; and Beaverton School District, Beaverton, Oregon. Many Child Service Demonstration Centers throughout the country have also contributed to our efforts.

Agencies currently participating in research in the juvenile justice system are the Overland Park, Kansas Youth Diversion Project, and the Douglas, Johnson, Leavenworth, and Sedgwick County, Kansas Juvenile Courts. Other agencies which have participated in out-of-school studies are: Penn House and Achievement Place of Lawrence, Kansas; Kansas State Industrial Reformatory, Hutchinson, Kansas; the U. S. Military; and Job Corps. Numerous employers in the public and private sector have also aided us with studies in employment.

While the agencies mentioned above allowed us to contact individuals and support our efforts, the cooperation of those individuals--LD adolescents and young adults; parents; professionals in education, the criminal justice system, the business community, and the military--have provided the valuable data for our research. This information will assist us in our research endeavors that have the potential of yielding greatest payoff for interventions with the LD adolescent and young adult.

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Introduction

The University of Kansas Institute for Research in Learning Disabilities was funded in 1977 to conduct research focusing on the learning disabled adolescent and young adult. The major findings presented in this report are drawn from two years of programmatic research and are presented at a mid-point in the history of Institute. Many of the studies described here are on-going research efforts that will continue for the next two years. At the same time, other studies of new questions and issues drawn from the findings presented here will be initiated.

The University of Kansas LD Institute has chosen to focus on the learning disabled adolescent and young adult in both school and non-school settings. Because of the lack of knowledge about LD adolescents existing in the field when the Institute was planned, the major effort in the initial years was the establishment of an epidemiological data base. This data base was developed in an effort to: (a) define the learning disabled population, (b) differentiate characteristics within the population, and (c) investigate environmental factors that influence the condition of learning disabilities. The epidemiological data base has provided direction for both the development of interventions and continuing investigations of the characteristics of LD adolescents in school and non-school settings. Major attention has now shifted to interventions designed to lessen, compensate for, or remediate the impact of learning disabilities.

The data at this point suggest that learning disabilities in adolescents and young adults is primarily characterized by cognitive and academic factors. Therefore, interventions being developed by the Institute primarily focus on cognitive and academic strategies. These

strategies have been (and continue to be) developed and implemented in school, juvenile justice, and job training settings. In school settings, these strategies relate primarily to the demands of the setting, i.e., gaining information from oral and written language and presenting information in written form. The data have also lead to the further investigation of metacognitive functioning and learning potential of LD individuals as well as characteristics of subgroups of the LD population. The Institute has also examined the demands of both school and non-school settings (such as employment, juvenile justice, job training, and military settings) in which LD adolescents and young adults must function. Both identification and intervention studies have been or are being conducted in these varied settings.

Format of this Research Report

The abstracts and major findings presented in this report were originally prepared for a colloquium presented for member researchers, graduate students, university faculty, and public school personnel in November, 1980. Major findings are presented in three sections: (a) Cognitive, Academic, and Setting Demands Findings; (b) Intervention Findings; and (c) Social Skills Findings. In each section, a brief statement of issues is presented. Then, abstracts of studies related to the particular area are included. These abstracts present the purpose of the study, briefly describe the methodology, and then list the major findings of the study. Finally, a statement of implications drawn from these studies is presented. Complete research reports for these studies are available from the Institute; therefore, the abstracts included here are not intended to provide extensive detail about individual studies.

Issues and Assumptions Related to Cognitive and Academic Characteristics of, and Setting Demands Experienced by, LD Adolescents and Young Adults

The major issues and assumptions which the University of Kansas Institute has attempted to investigate related to cognitive/academic characteristics and setting demands include:

1. Learning disabilities occur in individuals of average and above average intellectual functioning rather than in individuals of below average intellectual functioning.
2. Learning disabled individuals manifest specific academic deficits rather than global academic retardation.
3. Learning disabilities are inherent in the youth rather than the result of environmental influences.
4. Learning disabilities are unique to childhood rather than a handicap that persists into adolescence and adulthood.
5. Learning disabled individuals are as handicapped in adjusting to community living as they are as secondary school students.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive-Academic, Social

STUDY: An Epidemiological Study of LD Adolescents in Secondary Schools

PRINCIPAL INVESTIGATOR(S): Jean B. Schumaker, Michael M. Warner, Donald D. Deshler, Gordon R. Alley & Frances L. Clark

PURPOSE:

To collect a large body of data on the LD adolescent and his/her environment for the purpose of establishing a comprehensive data base.

SUBJECTS: Three groups of junior and senior high school students participated in this study: LD, low-achieving (LA), and normally-achieving (NA) students. LD students identified by their school districts and receiving services in an LD program were validated by an Institute team composed of two school psychologists and two LD teachers. This procedure assured that students not meeting the federal definition of LD would not be included in the LD sample. Two hundred forty-six LD students participated. In addition, 229 LA students meeting the following criteria participated: (a) had received at least one F in an academic course in the previous semester, (b) scored below the 33rd percentile on a standardized achievement test, (c) no history of special education services, and (d) had average intelligence. In addition, 215 senior high school normal achievers who scored above the 33rd percentile on a recently administered achievement test, had no failing grades, and were not receiving special education services also participated. Parents and regular classroom teachers of LD, LA, and NA students also participated.

METHODOLOGY: Data were collected on a large number of variables related to learner characteristics (personal descriptive, academic, social, medical/health) and environmental influences (family, school, interventions). All students completed the following: the reading, writing, and mathematic clusters of the Woodcock-Johnson Psycho-Educational Battery, the Vocabulary and Block Design subtests of the WISC-R (or WAIS, depending on age), a processing test (circular recall task), and a Youth Questionnaire. In addition, separate questionnaires were completed by parents, regular classroom, and special education teachers.

MAJOR FINDINGS:

Achievement and Ability

1. The average performance of LD students was significantly below that of low-achievers in reading, writing, and math at both the junior high and senior high levels.

2. With respect to estimated IQ, LD students performed significantly more poorly than low achievers at the senior high level, but not at the junior high level.

Epidemiology Study, con't.

The mean performance of LD students on estimated IQ at both levels is substantially below the normative mean of 100.

3. The measured ability of senior high students was considerably higher than that of the junior high students, although achievement remained uniformly low for students at both levels.

4. Clear differences in performance on ability and achievement measures were found across the two school districts involved in this study.

5. In each district, those students lowest in achievement are likely to be found receiving LD services.

SOCIOECONOMIC STATUS:

1. No significant differences appeared between LD and LA groups on any of the SES indicators at junior or senior high levels.

SCHOOL EXPERIENCES:

1. No significant group differences were found related to variety and constancy of school experiences.

ACADEMIC SELF-IMAGE AND ATTRIBUTIONS:

1. Although both LD and LA students also reported general satisfaction with school there was a significant difference between the satisfaction reported by LD students about their actual performance in school and that reported by LA students. LD students felt much better about their school performance.

2. No differences were found between the expectations of LD and LA students for additional formal schooling and job placement after school.

3. Twenty-two percent of the LD students reported they intended to graduate from college or receive a professional degree.

4. LD students differed most markedly from their LA and NA peers on measures of learning rate, ease of completing tasks, and attributions accounting for academic performance. LD students report that they learn things more slowly and in a different way than others.

HEALTH AND MEDICAL FACTORS:

1. Few differences exist among the LD, LA and NA groups. The differences that are apparent exist between the NA group and LD and/or LA group(s).

2. Mother's health during pregnancy of the LD adolescents was judged more complicated than mothers of NA adolescents.

3. Nutritional status of LD and LA groups was lower than the NA group.

4. NA adolescents reported taking more medication than LD adolescents.

Epidemiology Study, con't.

BEHAVIORAL AND EMOTIONAL STATUS:

1. Teachers perceived quantitative differences between LD and LA adolescents, most notably at the junior high school level. However, parents' perceptions of LD, LA, and NA adolescents' behavior revealed that no differences were noted between LD and LA adolescents.

2. Teachers perceived LD junior high school adolescents more positively than their LA peers on a number of social behaviors.

3. At the senior high school level, two academic behaviors -- excessively slow rate of reading and very poor reading comprehension -- were perceived by regular classroom teachers as differentiating the LD and LA students. LD senior high students were perceived as academically inferior to LA adolescents. No differences were noted in social and coping skills.

FAMILY FACTORS:

1. Few differences existed in the family conditions surrounding LD and LA adolescents.

2. The parents of LD students appear more supportive than parents of LA students. In addition, parents of LD adolescents appear to have a closer relationship with their LD children. They are also more satisfied with the education their children are receiving.

SOCIAL:

1. Few differences existed between LD and LA students in terms of social skills such as peer relationships, involvement in non-academic activities, and time use.

2. Differences evident among these populations were in activities with peers. LD students reported being asked to go somewhere with a friend less frequently than LA or NA students. Parents reported that LD youths ask other students to go somewhere with him/her more frequently than LA or NA youths.

3. LD adolescents appear not to be social isolates, but they appear to be treated the same as their peers who are also experiencing difficulty in school.

SUPPORT SERVICES:

1. LD and LA groups rely more on a variety of the support services (including those in schools as well as religious, medical, and community sources) than do NA students.

2. LD, LA, and NA adolescents are similar in their reliance on immediate family members for support; however, LD and LA adolescents rely on support services beyond the immediate family to a significantly greater degree than NA students.

3. Although LD and LA students use existing school support services more than NA students, a sizable group of all students indicated they would not use such traditional support services as the guidance counselor, principal, or teachers.

4. Both LD and LA students reported a strong reliance on friends for help. They also consider it likely that they will receive effective help from their friends. However, NA students report an even stronger reliance on friends.

CLASSIFICATION AND DISCRIMINATION OF LD AND LA ADOLESCENTS:

1. Ability and achievement test scores or written language alone reliably differentiate LD and LA students.

2. Two-thirds or more of the students were correctly classified using one of these achievement and ability measures.

3. Once ability and achievement are taken into account, very little else consistently adds to the classification and discriminant process.

4. LD and LA groups in this study appear to be much more alike than they are unalike.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive-Academic

STUDY: Formal Reasoning Abilities of LD Adolescents

PRINCIPAL INVESTIGATOR(S): Thomas M. Skrtic

PURPOSE:

To describe the developmental level of formal reasoning of LD adolescents, identify specific subcomponents of mathematics aptitude and achievement which represent deficiencies of LD adolescents, and identify the relationship among mathematics achievement and aptitude, reading achievement, and level of formal reasoning of LD adolescents.

SUBJECTS:

Seventy LD and 30 NLD seventh and eighth grade students participated. LD students had been identified by the cooperating school district and were receiving services in an LD program. NLD students were matched with LD students for age, sex, and school. The mean IQ for the LD group was 93.6.

METHODOLOGY:

The Classroom Test of Formal Reasoning (CTFR) was given to test formal reasoning abilities. Responses to this test provided information about the student's performance in relation to Piaget's levels of cognitive development. The Woodcock-Johnson Psycho-Educational Battery was given to determine levels of functioning related to math aptitude, math achievement, and reading achievement.

MAJOR FINDINGS:

1. LD students performed significantly below NLD students on the CTFR. Nearly all LD students were performing at the concrete operations stage of development.
2. Performance on the formal reasoning tasks was significantly related to both math aptitude and math achievement.
3. LD students scored significantly below NLD students on five of seven mathematics subtests of the WJPB.
4. It appears that mathematics performance of LD adolescents may be a generalized deficit in cognitive development and achievement rather than the traditional uneven profile attributed to LD students.

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INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive-Academic

STUDY: Analysis of Cognitive Abilities of Adolescents Learning Disabled Specifically in Arithmetic Computation

PRINCIPAL INVESTIGATOR(S): Edward L. Pieper and Donald D. Deshler

PURPOSE: To identify a group of students homogeneously defined as exhibiting a specific learning disability in arithmetic and to determine if visual-spatial, visual-reasoning, and visual-memory cognitive processes are related to the academic task failure exhibited by this population.

SUBJECTS: Sixty junior high school students labeled as learning disabled by their school districts and meeting specific criteria (consistent with the federal definition) for this study and 30 average achievers participated. Thirty of the LD students were identified as "specifically learning disabled in arithmetic" and 30 as "specifically learning disabled in reading". A significant difference was found in IQ among all three groups. However, no significant difference was found in IQ between the two LD groups.

METHODOLOGY: Demographic data as well as achievement and intelligence test scores were collected from school records. In addition, four subtests of the Woodcock-Johnson Psycho-Educational Battery (Spatial Relations, Visual-Matching, Analysis-Synthesis, Concept Formation), two subtests of the Revised Visual Retention Test, (Benton Copying and Benton Memory) and the Wide Range Achievement Test were administered to all subjects.

MAJOR FINDINGS:

1. Cognitive differences were found between learning disabled students with a severe, specific academic deficit and average achieving students.
2. Regardless of specific area (reading or math), students with a severe academic deficit did exhibit cognitive problems.
3. An association exists between poor performance on three cognitive subtests (Visual-Matching, Spatial Relations, Analysis-Synthesis) and a specific disability in arithmetic computation.
4. There is a relationship between two of the major components of the learning disabilities definition, academic task failure and specific cognitive abilities.

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INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive-Academic

STUDY: A Comparison of Learning Disabled Adolescents with Specific Arithmetic and Reading Disabilities

PRINCIPAL INVESTIGATOR(S): Edward L. Pieper and Donald D. Deshler

PURPOSE: To compare groups of students defined as exhibiting specific learning disabled in either arithmetic or reading on the following variables: school and LD class size, WISC verbal and performance scores, and academic achievement scores.

SUBJECTS: Sixty junior high school students labeled as learning disabled by their school districts and meeting specific criteria (consistent with the federal definition) for this study participated. Thirty students were identified for purposes of the study as "specifically learning disabled in arithmetic" (SLD-ARITH) and 30 as "specifically learning disabled in reading" (SLD-READ). No significant difference was found in IQ between the two groups. The SLD-ARITH group had math achievement grade level scores two or more years below reading achievement scores. The reverse was true for the SLD-READ group.

METHODOLOGY:

Demographic data as well as achievement and intelligence test scores were collected from the student's school records. In addition, the WRAT was administered to all students.

MAJOR FINDINGS:

1. Students with a specific disability in arithmetic were found in larger LD programs.

2. There was no difference between the two groups on WISC Verbal scores. However, the SLD-ARITH group was significantly lower on WISC Performance scores.

3. Performance on arithmetic and reading subtests across different instruments varied significantly. Often scores in arithmetic and reading could not be predicted from arithmetic and reading scores yielded by other instruments.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive-Academic, Setting Demands

STUDY: An Investigation of the Demands on Oral Language Skills of LD Students in Secondary Classrooms

PRINCIPAL INVESTIGATOR(S): Mary Ross Moran

PURPOSE:

To identify the demands placed upon the language skills of adolescents by teachers in mainstream secondary classrooms and to analyze the frequency of various types of language demands.

SUBJECTS:

Thirty-two teachers of core subjects in secondary schools participated. There were 25 senior high teachers and 7 junior high teachers in the sample. Twelve individuals were English teachers, 8 were mathematics teachers, 6 were social studies, and 6 were science teachers. There were 19 female and 13 male teachers.

METHODOLOGY:

The language of participating teachers was audiotape recorded for an entire class session (45 to 50 minutes). The tapes were transcribed and classroom language was coded under five main classifications as Informatives, Elicitations, Checks, Commands and Expressives. Data was also recorded on utterance length and utterance rate.

MAJOR FINDINGS:

1. Secondary teachers lectured significantly more often than they involved students in discussion through questioning. Junior high teachers lecture as much as senior high teachers.
2. Teachers present few advance organizers which might help students listen more efficiently.
3. Teachers don't very often reinforce appropriate behaviors or correct inappropriate activities.
4. Students speak only once for every four teacher utterances.
5. The mean number of morphemes per utterance in this study exceeds the recommended number when information is to be processed by adults.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive-Academic

STUDY: A Comparison of Formal Features of Written and Oral Language of LD, Low-Achieving, and Achieving Secondary Students

PRINCIPAL INVESTIGATOR(S): Mary Ross Moran

PURPOSE:

To extend detailed analytic procedures for measuring maturity in written language to two specific groups of underachievers and to determine whether LD students would differ from age and grade peers when achievement levels were held constant. In addition, oral language performance of three groups of adolescents was analyzed.

SUBJECTS: LD subjects were selected from students identified by the cooperating school districts and receiving LD services. School records data was submitted to a Validation Team of two school psychologists and two secondary LD teachers. Twenty-six LD subjects were selected by this process. Thirty-one low-achieving (LA) adolescents were identified using these criteria: (a) receiving no special services, (b) having received an F or a D grade in at least one academic core course during the previous semester, (c) demonstrating no evidence of any handicapping conditions, and (d) having scored below the 33rd percentile on one subtest of a recently administered achievement battery. Thirty achieving (ACH) students, having received no grade below a C for the previous semester also participated.

METHODOLOGY: Each subject completed three tasks. The paragraph-writing task involved the generation of an original paragraph, an opportunity to monitor for errors, and the production of a final copy. In the oral discussion task, the student read his/her written paragraph aloud and also was asked to discuss orally the same topic (oral responses were tape recorded). The topic-sentence construction task involved selecting several related sentences and writing a topic sentence that conveyed the main idea of those sentences.

MAJOR FINDINGS:

1. LD and LA adolescents are more alike than different in their performance on formal aspects of written and oral expression.
2. Spelling was the only formal feature of written language which was significantly lower for LD adolescents.
3. Achieving students consistently demonstrated superiority over LD students on formal aspects of written language.
4. LD students were similar to achieving students in flexibility of sentence types and word types, and in percentage of complex T-units.
5. No differences existed among the groups on four features of oral language.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive-Academic, Setting Demands

STUDY: Performance and Competence of LD and High-Achieving High School Students on Essential Cognitive Skills

PRINCIPAL INVESTIGATOR(S): Steven A. Carlson, Gordon R. Alley

PURPOSE:

To measure performance differences of LD and high-achieving (HA) high school students on skills judged crucial to academic learning and to determine teacher performance standards on the those same crucial learning skills.

SUBJECTS:

The subjects for this study were high school students in three different school districts in Oregon, Indiana and Kansas. High achievers were randomly selected from a list generated at each site. LD students identified by their school district and meeting specific criteria consistent with the regulations for PL 94-142, also participated. These LD students were predominately male with a mean age of 17.4 years. In addition, 23 high school content teachers from school districts in four states participated.

METHODOLOGY:

All students completed the Adult Performance Level Functional Literacy Test and a set of domain-referenced tests designed for the study. These instruments were specifically designed to function as preinstructional probes in five areas: knowledge of test-taking, scanning for information, monitoring errors, taking notes from lectures, and listening comprehension.

MAJOR FINDINGS:

1. The five domain referenced tests proved valid and reliable as pre-instruction performance probes of learning skills rated essential to high school success.
2. High achievers performed significantly better than LD students across the complex, and within every domain, of learning skills assessed.
3. Skills required to do well on a test of functional adult competence relate significantly to those required to do well on a domain referenced test of several learning skills.
4. When common variance between a test of functional adult competence and a domain referenced test of several learning skills is controlled, significant group differences remain due to learning skills.
5. Significantly greater proportions of LD students fall below teacher-derived standards of minimal competence in all skill areas assessed than do high-achieving students.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive

STUDY: A Mandated Minimum Competency-Based Testing Program and Its Impact on the Learning Disabled

PRINCIPAL INVESTIGATOR(S): Edward L. Meyen, Dale Scannell, Gordon R. Alley

PURPOSE:

To investigate: (a) the curricular validity of objectives upon which minimal competency tests are developed and (b) the assessment implications of applying a statewide test on learning disabled (LD) students.

SUBJECTS:

Phase I - 142 regular class teachers, 25 LD teachers and 48 parents of LD students in two school districts.

Phase II - 604 LD students in grades 1 through 12 in the same two school districts. All students were identified as LD by district teams using PL94-142 regulations. 55 of the LD students also were orally administered the Kansas Minimal Competency Test (KMCT).

METHODOLOGY:

Phase I - Teachers and parents of LD students judged 95 objectives used to generate items for the KMCT for their importance to LD students. Teacher groups also judged at which grade level LD students should achieve each of the objectives.

Phase II - LD students were administered the KMCT most appropriate to their present grade placements under standard conditions. A subsample of LD students were administered the KMCT orally.

MAJOR FINDINGS:

1. Teachers and parents judged all but one of the 95 KMCT objectives to be important for LD students to achieve.
2. Teachers judged most objectives of the KMCT to be appropriately placed by grade levels.
3. LD students performed significantly lower than NLD students on the standard administration of the KMCT.
4. LD students obtained higher scores on the KMCT as they progressed in school.
5. Differences in KMCT performance were not remarkable when the KMCT was orally administered to LD students.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Out-of-School, Cognitive

STUDY: The Current Status of Young Adults Identified as Learning Disabled During Their School Career

PRINCIPAL INVESTIGATOR(S): Warren J. White, Jean B. Schumaker, Michael M. Warner, Gordon R. Alley, and Donald D. Deshler

PURPOSE:

To examine among LD and non-LD (NLD) young adults a broad array of factors known to be indicative of personal, social, and vocational success.

SUBJECTS:

LD subjects for this study were selected from all students who received LD services during the 1972-73 school year through the 1978-79 school year in the participating school district. School records data were collected and subjects were validated as LD by a Validation Team of the Institute. NLD subjects were randomly selected from students who had never received special services. LD and NLD subjects were matched for intended year of graduation from high school. Forty-seven LD and 59 LD young adults participated.

METHODOLOGY:

All subjects completed a questionnaire which probed variables related to: demographic characteristics, family background, vocational characteristics, social/personal characteristics, legal characteristics, medical/drug characteristics, and perceptions of past and future education.

MAJOR FINDINGS:

1. Vocational--LD young adults were holding jobs with less social status and were less satisfied with their employment situation.

2. Social/Personal--LD young adults were less involved in recreational activities and social organizations and were less satisfied with their contacts with their parents. They were receiving less support from parents and relatives and more from professional counselors.

3. Medical--LD young adults reported using more prescription drugs.

4. Legal--LD young adults were more often convicted of crimes.

5. Educational--LD young adults were less satisfied with their school experiences, had lower aspirations for future education and training, and fewer educational plans.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive

STUDY: Validating the Process Dysfunction in LD Adolescents: An Experimental Analysis

PRINCIPAL INVESTIGATOR(S): Gordon R. Alley, Daryl F. Mellard

PURPOSE:

To evaluate LD students' performance on a discrimination learning task and to determine whether deficient performance results from a cognitive processing deficit or to a production deficiency resulting from passive participation in the learning process.

SUBJECTS:

LD junior high school students identified as learning disabled by their school district and receiving services in an LD program were validated by a four-member Validation Team of the LD Institute. Forty-two LD students participated. In addition, 42 NLD students, matched with the LD students for sex and age, participated.

METHODOLOGY:

Sixteen bi-valued discrimination learning problems were presented to each subject; the first problem was a training exercise, and the remaining 15 comprised the experimental problems. Following administration of the experimental problems under the condition of no reinforcement, subjects were randomly assigned to experimental and control groups within their respective categories (LD, NLD). For the experimental group, reinforcement and response cost were contingent upon the accuracy of responses. The control group received reinforcement regardless of how they performed.

MAJOR FINDINGS:

1. Reliable differences were found between LD and NLD students under the no reinforcement condition.

2. Under conditions of reinforcement and response cost, processing differences were also found.

3. Processing deficits were identified in the LD students' ability to code, recode, and recall information; they were also deficient in benefiting from explicit feedback.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive-Academic

STUDY: Use of the Bayesian Identification Procedure for LD Adolescents

PRINCIPAL INVESTIGATOR(S): Gordon R. Alley, Donald D. Deshler, Daryl F. Mellard, & Michael M. Warner

PURPOSE:

To determine: (a) which group(s) of professionals or parents make the most homogeneous identification decisions on LD criteria, (b) the temporal and inter-scorer reliability as well as the construct and content validity of the Modified Component Disability Instrument, and (c) the reliability and validity of the Modified Component Disability Checklist and Secondary Test Battery.

SUBJECTS:

A total of 216 professionals involved with educational programs for LD adolescents--LD, regular class, and remedial reading teachers, school psychologists, speech clinicians, school principals, and school counselors--as well as 11 parents participated in the study.

Twenty-one LD and 21 LA junior high school students also participated. Their language arts teachers completed the Modified Checklist.

METHODOLOGY: All professionals and parents completed the Modified Component Disability Instrument twice. A two-month interval separated the two completions. The Modified Instrument included 20 component disabilities (characteristics) found to relate to the condition of learning disabilities. Each of the professional groups and parents were asked to give their subjective judgment about each component disability. All LD and LA subjects were rated on the Modified Checklist by their language arts teachers and also completed the Test Battery for Learning Problems (Woodcock Reading Mastery Test-Word Attack, Stanford Achievement Test-Vocabulary and Spelling, and Ross Tests of Higher Cognitive Processes-Relevant and Irrelevant Information).

MAJOR FINDINGS:

1. Some behavioral characteristics differentiate LD from non-LD secondary students better than others.
2. LD specialists are an appropriate source of knowledge and experience to provide probabilities for component disabilities of LD secondary students.
3. There are unique clusters of behavioral manifestations that can be used when identifying LD adolescents.
4. One behavioral characteristic is not sufficient to identify LD adolescents.
5. The use of probability statements and their Bayesian derivatives is appropriate for describing LD among secondary students.
6. The Modified Checklist and the Test Battery for Learning Problems are moderately related but appear to measure different aspects of the component disabilities.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive-Academic, Social

STUDY: An Application of Attribution Theory to Developing Self-Esteem in LD Adolescents

PRINCIPAL INVESTIGATOR(S): Nona Tollefson, D. B. Tracy, & E. Peter Johnsen

PURPOSE:

To assess LD adolescents' perceptions of personal (internal) and environmental (external) causality as explanatory constructs in their academic success and failure and to determine the effect of effort attribution training on causal attributions and self-esteem.

SUBJECTS:

Thirty-five junior high school students identified as learning disabled by the participating school district and receiving services in an LD program participated in the study. Ninety-nine non-LD (NLD) students also completed the self-esteem and causal attribution instruments.

METHODOLOGY:

Three instruments measuring self-esteem and causal attributions were administered to the subjects. The LD students also participated in an attribution retraining program. The task selected for the program was a spelling task. The students were given 10 spelling words to study for a test to be given at a specified time. The teacher provided feedback to the student, attributing success or failure to effort ("You spelled that word correctly, you tried hard to learn to spell that word" or "If you spent more time studying, you could learn to spell that word").

MAJOR FINDINGS:

1. LD adolescents did not differ significantly from NLD adolescents in their responses to the self-esteem and attribution questionnaires.
2. Effort attribution training brought no significant increase in effort attributions for LD adolescents. Effort attributions were high prior to training and remained high after training.
3. LD students reported that effort was a factor that explained success or failure in achievement tasks; however, they reported that factors other than effort explained their personal success or failure on the spelling task.
4. LD adolescents had unrealistic expectancy of success scores. LD students seemed unable or unwilling to use data about task difficulty and prior performance on similar tasks.

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INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Out-of-School

STUDY: Performance of LD High School Students on the Armed Services Vocational Aptitude Battery

PRINCIPAL INVESTIGATOR(S): G. Mack Harnden, Edward L. Meyen, Gordon R. Alley, & Donald D. Deshler

PURPOSE:

To determine the eligibility of LD adolescents and young adults for entry into the Military.

SUBJECTS:

Twenty-four LD students (16 male and 8 female) identified by their school districts in Missouri, Kansas, and Iowa and currently receiving services in LD programs participated. All students took the Armed Services Vocational Aptitude Battery (ASVAB). Eight students were 10th graders, 9 were 11th graders, and 7 were 12th graders at the time the ASVAB was administered.

METHODOLOGY:

The ASVAB was administered to all LD students with non-LD students under standard administration procedures.

MAJOR FINDINGS:

1. Seven of the 24 LD students qualified for Army enlistment. Eight individuals qualified for enlistment in the Marines, nine for the Navy, while only one qualified for the Air Force.
2. Based on ASVAB scores, 29.27% of LD students qualified for Army enlistment compared to 90% of the NLD population.
3. Few school districts encourage LD students to take the ASVAB.
4. The performance of LD students was higher on ASVAB subtests which present items predominately through pictures or figures rather than printed words and numbers. Their poor performance on the ASVAB may be more indicative of deficient reading skills than of poor vocational potential.

Implications of the Findings Related to Cognitive/Academic Characteristics and Setting Demands

Several implications can be drawn from these Institute research studies. First, learning disabilities appear to be a cognitive/academic handicap. A corollary of this implication is that the distribution for a general population of youth with a mean IQ of 100 and a standard deviation of 15 or 16 does not appear valid for learning disabled (LD) youth. Second, LD youth demonstrate extreme academic achievement deficits. Thus, these students need supportive services to be mainstreamed in the regular classroom. In addition, remediation program effects at the elementary and secondary levels appear to be negligible on academic performance when measured by the Woodcock-Johnson cluster scores. Because LD students appear to demonstrate a general academic deficit as well as a cognitive deficit, teachers will need to provide interventions which account for general cognitive deficits rather than focusing on specific academic deficits. Fourth, the district in which the youth resides and the demands of the setting are conditional to an individual's classification as learning disabled. It appears from this implication that identification procedures and/or team decisions are discriminatory. The dynamics of this possible discrimination are evasive to us.

LD students are represented disproportionately on the Kansas Minimal Competency Test as individuals who do not demonstrate minimal competency levels in reading and math. This finding implies that a policy decision will be necessary regarding the appropriateness of minimum competency testing for LD students.

Outside the traditional secondary school setting, young adults in a Job Corps center can be identified as learning disabled using the classification markers for learning disabilities in secondary schools. Finally, the

quality of life of LD young adults appears to be lower or more limited than a representative group of young adults. LD young adults are: (a) found in lower status occupations, (b) less satisfied with their jobs, and (c) not aspiring to higher status jobs or more educational opportunities. This implication may be applicable to LD persons for a great portion of their adulthood.

Issues and Assumptions Related to Intervention for LD Adolescents and Young Adults

The University of Kansas Institute has attempted to draw upon its data base to make intervention decisions. These decisions have been made in the face of some basic assumptions prevailing in the field about intervention with LD adolescents and young adults. These issues and assumptions include:

1. The most appropriate interventions for LD adolescents are: (a) basic skills remediation in reading, writing, and mathematics; (b) teaching functional living skills to help adjustment to "real world"; and (c) tutoring in regular secondary courses.
2. LD adolescents are unmotivated and inactive in the learning situation because of their history of academic failure.
3. LD adolescents face a complex set of classroom demands in secondary schools.

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INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Intervention

STUDY: Teaching Learning Strategies to LD Adolescents

PRINCIPAL INVESTIGATOR(S): Donald D. Deshler, Jean B. Schumaker, Gordon R. Alley, & Michael M. Warner

PURPOSE:

To determine whether LD adolescents can acquire and generalize their use of learning strategies using an 8-step instructional sequence.

SUBJECTS:

Forty-nine junior and senior high school students identified by their schools or other diagnostic services as learning disabled.

METHODOLOGY:

Six learning strategies were taught using a variety of multiple baseline designs. The six strategies were: self-questioning, visual imagery, paragraph writing, monitoring writing errors, multipass, and a listening/note-taking strategy. Instruction on each strategy followed a standardized format including testing the student's current skill, description of the strategy, modelling the strategy for the student, verbal rehearsal, skill practice in ability level materials, feedback, skill practice in grade level materials, and feedback. Performance on the skills was assessed using a variety of observational checklists and comprehension tests.

MAJOR FINDINGS:

1. LD students can acquire learning strategies to criterion using the eight instructional steps. Of the 49 students, only one failed to learn a strategy to criterion.
2. LD students can generalize the use of the strategies to tasks not previously practiced.
3. LD students taught a reading strategy in ability level reading materials can generalize their use of the strategy to grade level reading materials.
4. LD students who have learned one of the reading strategies score higher on reading comprehension tests in both ability and grade level materials than they did before learning the strategy.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive, Intervention

STUDY: Implementing Goal Setting Activities with LD Adolescents

PRINCIPAL INVESTIGATOR(S): Nona Tollefson, D. B. Tracy, and E. P. Johnsen

PURPOSE:

To evaluate the effectiveness of an intervention designed to teach LD adolescents to set realistic achievement goals, to expend effort to reach the goals, and to accept personal responsibility for achievement outcomes.

SUBJECTS:

Sixty-one junior high school students identified as LD by school district guidelines and receiving services in an LD program participated in the study. The LD students were randomly assigned to an experimental or control group.

METHODOLOGY:

Goal setting and effort attribution training procedures were first implemented in physical and academic game situations. Tasks were presented to teams of students and strategies to approach the task of goal setting were discussed. Following this activity, an Achievement Contract Phase was implemented where students set goals related to either spelling or math tasks and maintained records of predicted and actual scores.

MAJOR FINDINGS:

1. LD adolescents can be taught strategies for goal setting.
2. The percentage of LD adolescents judged to exhibit realistic goal setting strategies increased significantly following training.
3. Experimental LD students used effort attributions to explain their performance significantly more often than they used ability, luck, or task difficulty attributions.
4. Experimental subjects as a group did not generalize the strategies learned during treatment to their regular school work.
5. The patterns of goal setting behaviors exhibited by LD students in the experimental group show heterogeneity in this group of LD students.
6. Thirty percent of the LD students showed patterns of behavior that defended against failure in ways which precluded academic success.

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INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive

STUDY: A Comparison of the Effectiveness of Verbal Rehearsal Instruction and Visual Imagery Instruction in the Facilitation of Storage and Recall of Sentences with LD and Achieving Junior High School Students

PRINCIPAL INVESTIGATOR(S): Carmen G. Arreaga-Mayer, Gordon R. Alley

PURPOSE:

To determine whether verbal rehearsal or visual imagery is most effective in facilitating learning and recall of sentences.

SUBJECTS:

Forty-six junior high school students (23 LD and 23 achieving students) participated in the study. LD students had been identified by the cooperating school district, were receiving services in an LD program, had average or above intelligence, and could recognize and understand individual words at the third grade level. Achieving students were identified by regular classroom teachers. They had never received special education services, had average or above intelligence, and were receiving no D's or F's on semester grade reports.

METHODOLOGY:

All students were presented a number of sentences specifying simple relationships between nouns. Following this presentation, LD and achieving students were randomly assigned to two treatment conditions. One group of LD students and one group of achieving students received instruction in verbal rehearsal while another group of LD students and another group of achieving students received instruction in visual imagery. Following instruction, all students were posttested.

MAJOR FINDINGS:

1. Following instruction, achieving students scored better (though not significantly) than LD adolescents.

2. Performance of the students, as a group, on the visual imagery instructional condition was not significantly better than on the verbal rehearsal condition.

3. There was no statistically significant interaction between the method and group dimension.

Implications of the Findings Related to Intervention

Several tentative conclusions or implications can be drawn from these initial intervention studies of The University of Kansas LD Institute. First, we can teach learning strategies to LD students and students do apply the strategies across different contexts. However, the relative effectiveness of learning strategies in comparison to other intervention approaches such as basic skills remediation, functional skill approaches, etc., have yet to be examined. In addition, specific student characteristics have not yet been compared to success in learning strategies. There are some other obvious needs still to be addressed. One, the learning strategies interventions have been applied in one-to-one settings. This year in various resource rooms, these interventions are being adapted to group situations because that is the primary mode through which instruction is delivered in the resource room setting.

The second major finding, at this point, is that an eight-step methodology for acquisition and generalization appears to be effective in teaching learning strategies to LD students. This methodology for teaching acquisition and generalization must be examined to determine if all the steps are appropriate.

A third implication relates to studying the demands of the setting. If we are serious about mainstreaming LD students and helping them adjust more effectively to the regular class setting, the demands of that setting must be used to define the interventions used for LD students.

Another implication relates to the issue of motivation. Some innovative techniques that go beyond the use of extrinsic and tangible reinforcers have a powerful impact on secondary LD students' motivation.

A very important area remaining to be examined is the relative power of the various learning strategies to determine which ones have the greatest impact. In addition, the impact of these interventions across student characteristics, age, grade level, and educational history must be investigated to determine those factors critical to success in the learning strategies interventions.

Issues and Assumptions Related to Social Skills of LD Adolescents and Young Adults

Issues, practices, and assumptions related to the social skills of LD adolescents and young adults which the University of Kansas Institute has addressed include:

1. Social imperception is a characteristic that differentiates LD individuals from their age peers.
2. LD individuals who come into contact with the justice system are more apt to be identified as juvenile delinquents, in comparison to other individuals not labeled as learning disabled.
3. Social skills can be taught to LD individuals, and they can be generalized to novel situations.
4. Social skills are often the primary curriculum focus for LD adolescents to the exclusion of academic or vocational instruction.

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INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Cognitive-Academic, Social, Setting Demands

STUDY: An Observational Study of the Academic and Social Behaviors of LD Adolescents in the Regular Classroom

PRINCIPAL INVESTIGATOR(S): Jean B. Schumaker, Jan Sheldon-Wildgen, James A. Sherman

PURPOSE:

To compare learning disabled adolescents' classroom performances to performances of their peers who are successful participants in the regular classroom environment.

SUBJECTS:

Forty-seven learning disabled (LD) (identified by their school district) and 47 non-learning disabled (NLD) junior high school students ("model" students identified by regular classroom teachers) participated in the study. The IQ scores for LD students ranged from 80 to 116 with a mean of 92.79. On reading achievement, the LD students' mean percentile score was 21%, whereas the NLD students' mean score was 77.5%. On math achievement, the LD students' score was 24%, whereas the NLD students' mean score was 73%.

METHODOLOGY:

Both LD and NLD students were observed in their regular classrooms using a continuous recording system. Study behaviors, social behaviors, and classroom conduct behaviors were observed.

MAJOR FINDINGS:

1. When students were not working on written assignments or reading, the teachers often explained material to students in the form of a lecture. There was little student interaction with the teachers.
2. LD students spent more time and greater lengths of uninterrupted time in the specific study behaviors of reading, writing, and note-taking than did NLD students.
3. Social behavior comparisons indicate that LD junior high students are not social isolates in the classroom.
4. Results of this study suggest that there are many similarities and few differences between LD adolescents and their NLD peers with regard to study, social, and classroom behaviors overtly observed in their regular classes.

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INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Social, Intervention

STUDY: The Effects of Self-Regulation Procedures on Academic Task Completion of LD and Non-LD Adolescents

PRINCIPAL INVESTIGATOR(S): Gary O. Seabaugh, Jean B. Schumaker

PURPOSE:

To assess the effects of a procedure combining self-control procedures with a teacher-implemented delivery system on the academic task completion of LD and non-LD (NLD) adolescents.

SUBJECTS:

Nine adolescents attending an alternative high school participated in the study. LD students were identified by submitting achievement and intelligence test scores and school records to a four-member Validation Team. To be classified as LD, three of four members had to vote affirmatively that a student was LD.

METHODOLOGY:

Students completed a self-regulation skill package consisting of four components: use of a behavior contract (including academic goal setting, task-analysis, and specification of self-contingencies), self-recording procedures, self-evaluation, and self-reinforcement. A sequence of teacher-student conferences delivered the self-regulation skill package. Specific components were implemented with the academic tasks of reading, writing, and math.

MAJOR FINDINGS:

1. Both LD and NLD students can be taught and can implement self-regulation skills.
2. LD students required more time and more encouragement to implement the self-regulation skill.
3. The concept of self-regulation was highly motivating to the NLD students. Immediate and more stable progress was demonstrated by NLD students.
4. NLD students more often exceeded their goals than did LD students.

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INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Social

STUDY: The Effects of Three Conferencing Procedures on the Academic Productivity of LD and Non-LD Adolescents

PRINCIPAL INVESTIGATOR(S): Gary O. Seabaugh, Jean B. Schumaker

PURPOSE:

To assess the effectiveness of conferencing procedures in increasing academic performance of LD and non-LD (NLD) adolescents.

SUBJECTS:

Ten adolescents attending an alternative high school participated in the study. All students were enrolled because they had histories of non-compliance in the home and at school and were described as non-functional in their previous academic settings. Seven students were LD and three, NLD.

METHODOLOGY:

Three procedures to increase a student's attendance and the number of lessons completed per day were studied. They were: teacher-student conferences, parent-student-teacher conferences combined with weekly feedback, and parent-student-teacher conferences combined with feedback and back-up reinforcers.

MAJOR FINDINGS:

1. Conference situations, both teacher-student and parent-student-teacher, produced immediate, but slight, increases in number of lessons completed by LD and NLD students.
2. Student responses to the treatment sequence varied greatly.
3. None of the conference situations produced behavior change that was maintained over an extended period of time.
4. Teacher conferences were effective in producing initial increases in amount of work completed.

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INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Social

STUDY: Teaching Self-Control Procedures to LD Youths

PRINCIPAL INVESTIGATOR(S): Carol Foster, Connie Dennis, & Joni Maxwell

PURPOSE:

To train LD students to apply three components of self-management (self-recording, goal-selection, and self-administration of reinforcers) to academic behaviors in resource room settings.

SUBJECTS:

Four LD students, identified as such by their school district and receiving services in an LD program, participated in this study. The students were seventh and eighth graders with reading achievement levels at fourth and fifth grade. Math achievement levels ranged from fourth to seventh grade and spelling achievement levels from third to fourth grade.

METHODOLOGY:

The students completed a self-instructional package that provided information about three components of self-management -- self-recording, goal-selection, and self-administration of reinforcers. As the package was being completed specific academic behaviors, primarily in math and reading, were chosen for modification. The behaviors differed across students depending upon the academic behaviors targeted in the resource room, the interests of the student, and the priorities of the teacher.

MAJOR FINDINGS:

1. Seven of ten academic behaviors targeted by LD adolescents increased following instruction in self-recording.

2. Four of the seven behaviors targeted in the goal-setting condition increased over performance in the self-recording condition.

3. Increases in target behaviors under self-recording and goal-setting conditions were sporadic and highly variable.

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AREA(S): Social

STUDY: Improving Social Interactions Between LD Adolescents and Teachers: A Child Effects Approach

PRINCIPAL INVESTIGATOR(S): Edward K. Morris, Beth Gorney, Jane Atwater, Lynda Powell

PURPOSE:

To determine whether LD adolescents can be taught to: (a) change their classroom behavior in ways that will effect how their teachers treat them, (b) affect generalized positive changes in their interactions with their teachers, and (c) recruit the extra attention, concern, and instruction they may need from their teachers.

SUBJECTS:

Six male adolescents identified by their school district as learning disabled and receiving services in an LD program participated in the study. Four of the students were in seventh grade, one in eighth grade, and one in ninth grade. In addition, seven junior high school regular classroom teachers participated. Target LD students were observed in interaction with three of the teachers in classroom settings. All seven teachers completed subjective ratings of the students' classroom behaviors.

METHODOLOGY:

Three social skills -- initiating positive interactions, responding to requests, and recruiting attention for individual help -- were selected for training. Baseline data were collected in regular classrooms and each student's performance of the target skills was assessed in role-playing situations. Training involved reading and discussing a written description (including a rationale, when to perform the skills, detailed explanations of the component behaviors, and correct and incorrect examples of the skills), practice (role-playing) of the skill, and feedback.

MAJOR FINDINGS:

1. LD students were relatively successful at learning the target skills.

2. Although the LD students did not exhibit the target skills consistently in the regular classroom, they did attempt to practice the target skills in their regular classes.

3. Although positive teacher-student interactions did not increase, negative interactions decreased and neutral interactions increased.

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INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Social, Setting Demands

STUDY: The Regular Classroom Interactions of LD Adolescents and Their Teachers

PRINCIPAL INVESTIGATOR(S): Thomas M. Skrtic

PURPOSE:

To describe the teacher-student interactions of LD adolescents and their regular classroom teachers, and to compare the perceptions of LD students about their interactions with their regular teachers with the observed interactions of these students and their teachers.

SUBJECTS:

Twenty-nine classroom observational units consisting of an LD student, a non-LD (NLD) student, and a regular classroom teacher were studied. LD students were selected from those identified by the cooperating school district and receiving services in an LD program. NLD students were randomly selected from the same regular classes in which LD students were enrolled. LD and NLD students were enrolled in grades 9-12 and were observed in science, mathematics, language arts, or social studies classes.

METHODOLOGY:

Six general areas of classroom interactions were observed--teacher approval, teacher disapproval, teacher reactions to student when called on, teacher reactions to student's self-initiated response (volunteer answers), teacher responses to student's request for help, and teacher-initiated acts of assistance to target students. Teachers rated the behaviors of both LD and NLD students in three areas--defiance, hyperactivity, and dependency. Students reported their perceptions of teacher approval and disapproval and their attitude toward regular classroom placement.

MAJOR FINDINGS:

1. Regular classroom teachers interacted with LD and NLD students with comparable frequency. LD students volunteered answers and requested help as often as NLD students. Teachers called on and offered assistance to LD students as often as they did to NLD students.
2. Teachers in this study did not rate LD students as more hyperactive, defiant, or dependent than their NLD peers.
3. The majority of teacher-student interactions were academic in nature, rather than social. Academic interactions were predominately positive, while social interactions were more often negative.
4. LD students received about the same proportion of approval and disapproval.
5. LD students perceived their teachers as less approving and more disapproving of them than NLD students did. They also reported being happy in their regular classroom less often than NLD students.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Out-of-School, Social, Cognitive-Academic

STUDY: Behavioral Assessment of Occupational Skills of LD Adolescents

PRINCIPAL INVESTIGATOR(S): R. Mark Mathews, Paula L. Whang, Stephen B. Fawcett

PURPOSE:

To gather epidemiological data on the magnitude of differences in occupational skills among LD youths and their non-LD (NLD) peers.

SUBJECTS:

Twenty-five LD students identified by the participating school district and receiving services in an LD program and 25 NLD students randomly selected from the same high school participated. Students in both groups ranged in age from 15 to 19 years, were in grades 10-12, and had held an average of 2.5 part-time jobs.

METHODOLOGY:

Each student participated in thirteen job-related situations of an occupational skills assessment instrument. The instrument used a series of role-playing tasks to measure performance of ten social-interaction and three written job-related situations. Such employment-related situations as writing a letter to request an interview, participating in a job interview, accepting a suggestion from an employer, explaining a problem to a supervisor, etc., were included.

MAJOR FINDINGS:

1. These high school adolescents demonstrated low levels of employment-related skills.

2. NLD adolescents performed significantly better than LD adolescents on seven of the thirteen job-related skills.

3. LD adolescents had the greatest difficulty in non-social interaction situations that require writing and computational skills. NLD students performed better on the non-social interaction tasks than the situations requiring social skills.

4. LD students performed significantly below NLD students on the social skills of participating in a job interview, accepting criticism from an employer, providing constructive criticism to a co-worker, and explaining a problem to a supervisor. However, the overall performance on social interaction skills of the two groups was not significantly different.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Social, Out-of-School

STUDY: Teaching Job-Related Social Skills to LD Adolescents

PRINCIPAL INVESTIGATOR(S): Paula L. Whang, Stephen B. Fawcett, R. Mark Mathews

PURPOSE:

To analyze the effects of training procedures and materials designed to teach specific job-related social skills.

SUBJECTS:

Two LD high school students, identified by their school district and receiving services in an LD program, participated in the study. The LD adolescents were employed at the time of the study.

METHODOLOGY:

Six job-related social skills were taught to the LD adolescents -- accepting criticism, providing constructive criticism, explaining a problem, accepting an instruction, providing a compliment, and accepting a compliment. The training followed a standardized format that consisted of reading the instructional materials (including written specifications for the task, examples of appropriate performance of the task, and rationales for each task), practice, and corrective feedback. Performance of the social skills was assessed by the investigators and five employment experts.

MAJOR FINDINGS:

1. Training in job-related social skills resulted in increases in the target behaviors for both trainees.

2. Follow-up observations indicated that the appropriate skills maintained over time.

3. Performance on target job-related social skills generalized to the LD trainees' places of employment.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Out-of-School

STUDY: Teaching Job-Seeking Skills to LD Adolescents: An Experimental Analysis and Social Validation

PRINCIPAL INVESTIGATOR(S): R. Mark Mathews, Stephen B. Fawcett

PURPOSE:

To analyze the effectiveness of training procedures designed to teach the skills involved in completing an employment application and writing a resumé that communicates effectively the job applicant's skills.

SUBJECTS:

Three LD high school students, identified by their school district and receiving services in an LD program, participated in the study. The students were all twelfth graders and had previously held three to four part-time jobs.

METHODOLOGY:

Students were asked to complete a job application and to write a resumé. Training followed a standardized format that consisted of reading the instructional materials (including specifications for the behaviors, examples of appropriate performances of the task, and rationales for each task), practice, and corrective feedback. This procedure was followed for learning units on completing the personal data sheet, completing an application, and writing a resumé.

MAJOR FINDINGS:

1. The training procedures were effective in teaching resumé writing and employment application skills to LD adolescents.

2. Employers' rating data suggest that training was effective in improving the appearance and content of the application materials of the LD adolescents.

3. The employers viewed the applicants (LD adolescents) as better qualified for employment after training and stated that they were more likely to invite the applicants to participate in a job interview.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Social, Intervention

STUDY: Training Social Skills in Three Groups of Adolescents: Learning Disabled, Non-Learning Disabled and Juvenile Delinquents

PRINCIPAL INVESTIGATOR(S): J. Stephen Hazel, Jean B. Schumaker, Jan Sheldon-Wildgen

PURPOSE:

To determine the extent of social skills deficits exhibited by LD adolescents; to determine whether, through the involvement in a social-skill training program, LD adolescents can learn the skills and generalize them to new situations; and to compare the social skill levels and responses of LD adolescents to those of other adolescents exhibiting problems in the social realm.

SUBJECTS:

Seven LD students, currently attending an alternative high school, were identified by a three phase process including achievement and ability testing, collection of school records data, and validation by a four-member team of LD teachers and school psychologists. Seven non-LD (NLD) students, also attending the same school but not validated as LD by the process described above, also participated. A third group of students who participated in the social skills training program were on probation with a juvenile court.

METHODOLOGY:

Six social skills were chosen for training: giving positive feedback, giving negative feedback, accepting negative feedback, resisting peer pressure, negotiation, and personal problem-solving. A specific training procedure was used that involved describing the skill, discussing the rationale for the skill and its components, discussing situations in which the skill might be used, modelling the skill, verbally rehearsing the skill steps, and role-playing the skill.

MAJOR FINDINGS:

1. All groups of youths acquired the skills and generalized them to novel situations.

2. LD youths acquired the social skills at the same levels and at the same rate as the other youths.

3. On the problem-solving skill, LD youths performed consistently lower than the other two groups after training.

4. All three groups of youths showed uniformly low levels on the social skills prior to training.

5. LD youths do not appear to have special skill deficits beyond those of other youths experiencing adjustment difficulties.

THE UNIVERSITY OF KANSAS

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES

AREA(S): Out-of-School

STUDY: Overland Park Youth Diversion Project Study (LD/JD)

PRINCIPAL INVESTIGATOR(S): Donald D. Deshler & Gordon R. Alley

PURPOSE:

To determine the prevalence of learning disabilities in a juvenile population identified at intake into the juvenile court system.

SUBJECTS:

One hundred seventeen juveniles identified at intake into the juvenile court system, but not as yet adjudicated, were screened for probability of learning disabilities using the Bayesian Screening Procedure. A smaller sample of the alleged delinquent youth group (55) and a group of parents of the alleged delinquent youth group (33) were given questionnaires on a wide variety of variables. The responses were compared to matched samples of low-achieving (LA) students, LD students, and normally-achieving (NA) students.

METHODOLOGY:

The alleged delinquent youth group's classroom teachers were given the Bayesian screening checklist, and a battery of tests used in the screening procedure were administered to the group. Questionnaires were administered to the youths in all groups individually, and a questionnaire was given to parents. Additionally, school records information was collected for the alleged delinquent youth group.

MAJOR FINDINGS:

1. Six to 11% of the delinquent youth group had a high probability of learning disability.

2. Scores on standardized tests reflected average ability and achievement, but grade point average and attendance reflected limited school success.

3. Responses by both parents and youths on a number of variables regarding learner characteristics and environmental influences indicated that the delinquent youth group most closely resembled the low-achieving student group (data drawn from the epidemiology data bank).

Implications of the Findings Related to Social Skills

A number of conclusions and implications can be drawn from these findings. First, LD adolescents are not notably different from other adolescents when social behaviors are measured quantitatively. LD students contribute in class and are called upon as often as their non-LD peers by the teachers. Data are not available on the quality of these social interactions. Further research is needed to determine the comparative quality of LD student and regular teacher interactions.

Second, LD adolescents can learn social skills with other adolescents. It may be that programs developed to train social skills for all adolescents are adequate for LD adolescents. No special social skills training programs need to be designed specifically for LD students.

Third, generalization of social skills to the natural setting must be examined. Based on the employment training data, generalization to the natural setting either may not occur, or is only minimally transferred.

The University of Kansas

Institute for Research in Learning Disabilities
Emphasis on Adolescents and Young Adults

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The University of Kansas IRLD now has a number of reports available that describe studies conducted by, or under the auspices of, Institute researchers. In addition, several papers have been prepared by Instutite staff members which address issues related to research on learning disabilities in adolescents. The following Research Reports and Research Monographs are now available (on a pre-paid basis) for the cost of postage, reproduction, and handling ($2.00 each, unless otherwise noted) from: Coordinator of Research Dissemination, Institute for Research in Learning Disabilities, 313 Carruth-O'Leary Hall, The University of Kansas, Lawrence, Kansas 66045.

RESEARCH REPORTS

No. 1 An Investigation of the Demands on Oral Language Skills of Learning Disabled Students in Secondary Classrooms--M. R. Moran (1980)

The demands placed upon students in mainstream secondary classrooms by the oral language behaviors of teachers were investigated. Data were analyzed for 32 teachers, for junior and senior high teachers, and for teachers of various subject areas. Analysis of variance revealed significant differences in favor of lectures over questions, commands over checks of understanding of commands, and commands over feedback. Results support a conclusion that the lecture format of secondary core classrooms does not take into account the learning characteristics of learning disabled students.

No. 2 Identification of Learning Disabled Adolescents: A Bayesian Approach--G. R. Alley, D. D. Deshler, & M. M. Warner (1980). Published in Learning Disability Quarterly, 1979, 2 (2), 76-83.

The identification of learning disabled adolescents for program placement is a major concern of school personnel. The identification model discussed in this article addresses an array of problems associated with identification of L.D. populations. The Bayesian approach is an alternative to traditional methods that rely primarily on psychometric data or classroom/clinical observation for identification decisions.

No. 3 Identification Decisions: Who is the Most Consistent? G. R. Alley, D. D. Deshler, & D. Mallard (1980). Published in Learning Disability Quarterly, 1979, 2 (4), 99-103.

This study was designed to: (a) examine the type of judgments on LD characteristics rendered by multidisciplinary team members and (b) explore which of the groups typically represented on a staffing team was most homogeneous in making decisions on LD students. The consistency of judgment among groups were comparable when making judgments on LD and non-LD characteristics. Thus, the findings were supportive of the multidisciplinary approach to identification and evaluation of LD children and youth.

No. 4 Development and Validation of an Occupational Skills Assessment Instrument--R. M. Mathews, P. L. Whang, & S. B. Fawcett (1980). Published in Behavioral Assessment, 1980, 2, 71-85.

An occupational skills assessment instrument designed to assess a participant's actual level of occupational skills in a variety of job-related situations is described. The results show that: (a) the situations in the assessment were considered to be important and representative, (b) the satisfaction ratings of employment experts were correlated with the observed performance of participants, and (c) participant performance was correlated with observations using another method of measuring job-related behavior.

No. 5 Behavioral Assessment of Occupational Skills of Learning Disabled Adolescents--R. Mathews, P. Whang, S. Fawcett (1980) To be published by Journal of Learning Disabilities, 1981.

This study, using direct observation and measurement techniques, analyzed occupational skills of LD and non-LD youths. The results showed low levels of employment-related skills for both groups of adolescents. However, the non-LD adolescents performed significantly better on the job-related skills. These differences were consistent across job-finding and job-retention skills.

No. 6 Behavioral Assessment of Job-Related Skills: Implications for Learning Disabled Young Adults--R. Mathews, P. Whang, S. Fawcett (1980)

This study, using direct observation and measurement techniques, analyzed the occupational skills of unemployed and successfully employed adults. Employed adults performed significantly better on each of the thirteen job-related skills involved in the occupational skills assessment. These differences were consistent across job-finding and job-retention skills.

No. 7 Formal Reasoning Abilities of Learning Disabled Adolescents: Implications for Mathematics Instruction--T. Skrtic (1980)

This investigation examined the level of formal reasoning in mathematics of LD adolescents. The results suggest that junior high LD students are functioning at the concrete operations stage of Piaget's developmental sequence. The need for mathematics interventions which use enactive and iconic, as well as verbal/symbolic, representations is stressed.

No. 8 The Regular Classroom Interactions of Learning Disabled Adolescents and Their Teachers--T. Skrtic (1980)

This study examined the interactions of LD students and their teachers through direct observation in regular classroom. Results indicated that teachers were quitable in their interactions with LD and non-LD students and did not perceive LD students as more hyperactive, defiant, or dependent than non-LD students, they perceived less approval and more disapproval from their teachers and were happy in their regular classrooms significantly less often than non-LD students.

No. 9 The Homogeneity of Identification Decisions by Different Groups on LD Adolescents--D. Deshler, G. Alley, D. Mellard, & M. Warner (1980)

No. 10 Reliability and Validity of the Bayesian Identification Procedure for Learning Disabled Adolescents--G. Alley, D. Deshler, D. Mellard & M. Warner (1980)

No. 11 A Multi-Trait, Multi-Method Analysis of the Bayesian Screening Instrument and Test Battery for LD Adolescents--G. Alley, D. Deshler, D. Mellard, & M. Warner (1980)

Three related studies (9, 10, 11) were designed to address some key issues in identification confronting the learning disability field. The first study (No. 9) addressed the question of which group(s) of professionals or parents make the most homogeneous identification decisions on learning disabilities' criteria. In the second study (No. 10), the temporal and interscorer reliability as well as the construct and content validity of the Modified Component Disability Instrument was investigated. The reliability and validity of the Modified Component Disability Checklist and Secondary Test battery were investigated in the third study (No. 11).

No. 12 An Epidemiological Study of Learning Disabled Adolescents in Secondary Schools: Details of the Methodology--J. Schumaker, M. Warner, D. Deshler, & G. Alley (1980)

No. 13 An Epidemiological Study of Learning Disabled Adolescents in Secondary Schools: Achievement and Ability, Socioeconomic Status, and School Experiences--M. Warner, G. Alley, J. Schumaker, D. Deshler, & F. Clark (1980)

No. 14 An Epidemiological Study of Learning Disabled Adolescents in Secondary Schools: Academic Self-Image and Attributions--D. Deshler, J. Schumaker, G. Alley, M. Warner, & F. Clark (1980)

No. 15 An Epidemiological Study of Learning Disabled Adolescents in Secondary Schools: Health and Medical Aspects--G. Alley, D. Deshler, M. Warner, & J. Schumaker (1980)

No. 16 An Epidemiological Study of Learning Disabled Adolescents in Secondary Schools: Behavioral and Emotional Status From the Perspective of Parents and Teachers--G. Alley, M. Warner, J. Schumaker, & D. Deshler (1980) $3.00

No. 17 An Epidemiological Study of Learning Disabled Adolescents in Secondary Schools: The Relationship of Family Factors to the Condition of Learning Disabilities--J. Schumaker, D. Deshler, G. Alley, M. Warner (1980). Submitted for publication.

No. 18 An Epidemiological Study of Learning Disabled Adolescents in Secondary Schools: Social Status, Peer Relationships, Time Use and Activities In and Out of School--D. Deshler, J. Schumaker, M. Warner, G. Alley, & F. Clark (1980)

No. 19 An Epidemiological Study of Learning Disabled Adolescents in Secondary Schools: Use of Support Systems In and Out of School--D. Deshler, G. Alley, M. Warner, J. Schumaker, & F. Clark (1980)

No. 20 An Epidemiological Study of Learning Disabled Adolescents in Secondary Schools: Classification and Discrimination of Learning Disabled and Low-Achieving Adolescents--M. Warner, G. Alley, D. Deshler, & J. Schumaker (1980)

The University of Kansas Institute for Research in Learning Disabilities has collected a broad array of data to form an epidemiological data base on LD adolescents and young adults. Data have been collected from learning disabled, low-achieving, and normal-achieving adolescents as well as from their parents and teachers. In addition, information from the environmental setting of the LD adolescents which pertains to interventions applied on behalf of the student, relationships with others, conditions under which he/she operates and support systems available for his/her use has also been collected. These data have been considered in relation to data on specific learner characteristics to gain a more complete profile of the older LD individual. Research results presented in Research Reports 12 through 20 detail findings from this comprehensive epidemiology study conducted during 1979-80 by the Institute. It is important for the reader to study and view each of these individual reports in relation to this overall line of research. An understanding of the complex nature of the learning disability condition only begins to emerge when each specific topic or finding is seen as a partial, but important, piece of a larger whole.

No. 21 The Current Status of Young Adults Identified as Learning Disabled During Their School Career--J. White, J. Schumaker, M. Warner, G. Alley, & D. Deshler (1980). Submitted for publication.

This study sought to examine among LD and non-LD (NLD) young adults a broad array of factors known to be indicative of personal, social, and vocational success. The results indicate that the LD young adults sampled appear to be adjusting as well as the NLD sample in a number of important areas (e.g., getting and maintaining employment, having friends, etc.). However, LD young adults reported they were significantly less satisfied with their employment situation and their contacts with parents and relatives. They were much less involved in recreational and social activities and few had plans for further education and training.

No. 22 An Observational Study of the Academic and Social Behaviors of Learning Disabled Adolescents in the Regular Classroom--J. Schumaker, J. Sheldon-Wildgen, & J. Sherman (1980). Accepted for publication, Journal of Learning Disabilities.

This study examined the classroom performance of LD adolescents and the performance of their peers who are successful participants in the classroom environment. The observational data reveal that the majority of student time was spent attending to work material and that very little interaction occurs between students and teachers. LD students spent engage in somewhat more rule violations in the classroom and interact as frequently and with as many peers as non-LD students. Results suggest that many similarities and few differences exist between LD adolescents and their non-LD peers in study, social, and classroom behaviors.

No. 23 An Application of Attribution Theory to Developing Self-Esteem in Learning Disabled Adolescents--N. Tollefson, D. Tracy, E. Johnsen, S. Borgers, M. Buenning, A. Farmer, & C. Barke (1980)

The study found that LD adolescents did not differ significantly from non-LD adolescents in their responses to general self-esteem and attribution questionnaires. Effort attribution training brought no significant increase in effort attributions for the experimental group of LD students. LD students reported that effort was a factor that explained success or failure in achievement tasks, but also reported that factors other than effort explained their personal success or failure on a specific spelling task.

No. 24 Performance of Learning Disabled High School Students on the Armed Services Vocational Aptitude Battery--G. Harnden, E. Meyen, G. Alley, & D. Deshler (1980)

This study examined the performance of 24 LD high school students on the Armed Service Vocational Aptitude Battery. A total of 29.2% of the LD subjects were found to qualify for enlistment in the Army based on the requirements for high school graduates, while 16.7% qualified based on the non-high school graduate requirements. Based on high school graduate requirements, 33.3% qualified for the Marine Corps, 37.5% qualified for the Navy, and 4.2% qualified for the Air Force. The vocational areas in which the students qualified most frequently were Skilled Technical, Clerical, Combat Arms. Machine and Vehical Operators and Food Service, and General Maintenance.

No. 25 Not currently available.

No. 26 Analysis of Cognitive Abilities of Adolescents Learning Disabled Specifically in Arithmetic Computation--E. Pieper & D. Deshler (1980)

This investigation identified a group of adolescents homogeneously defined as specifically learning disabled in arithmetic and examined whether cognitive processes measured by visual-spatial, visual-reasoning, and visual-memory tasks are related to this task failure. The results indicate that a relationship exists between academic task failure and specific cognitive abilities. There is validity to these two components of the LD definition when a very specific population of students disabled in arithmetic have been identified.

No. 27 A Comparison of Learning Disabled Adolescents with Specific Arithmetic and Reading Disabilities--E. Peiper & D. Deshler (1980)

Forty-three junior high learning disabilities program were surveyed to identify students who were specifically disabled in either arithmetic or reading. The results indicated that students with a specific disability in arithmetic were found in larger LD programs. There was no difference between the two groups on WISC Verbal scores. However, students specifically disabled in arithmetic were significantly lower on WISC Performance scores.

No. 28 Parental and Staff Expectations for the Future Achievement of Learning Disabled Students--H. Sinning, F. Hudson, & D. Deshler (1980)

The results of this study indicated that: (a) the difference between the expectations of mothers and fathers of LD youth was generally insignificant in most areas of achievement, (b) in most areas of achievement, school staff members expectations were found to be insignificantly different from each other, (c) in most areas of achievement, school staff members' expectations were significantly lower for LD children than their parents, and (d) the child's birth order had a significant effect upon parental expectations for future achievement. Significant differences were found between parents in the areas of Total Achievement Potential and Social-Personal Adequacy. No significant differences were found in parental expectations in the Academic Adequacy and Economic Adequacy areas.

No. 29 A Comparison of Youths Who Have Committed Delinquent Acts with Learning Disabled, Low-Achieving, and Normally-Achieving Adolescents--B. K. Lenz, M. M. Warner, G. R. Alley, & D. D. Deshler (1980)

This study compared a group of youths who had committed delinquent acts with LD, low-achieving, and normally-achieving adolescents. Youths who had committed delinquent acts most resembled the low-achieving group based on student and parent interview responses. The delinquent youth group generally indicated below average grade point averages; however, their achievement test scores were average. In addition, family relationships and difficulty in problem sovling appeared to distinguish this group from all three groups.

No. 30 Application of a Social Skill and Problem-Solving Group Training Program to Learning Disabled and Non-Learning Disabled Youth--J. S. Hazel, J. B. Schumaker, & J. Sheldon-Wildgen (1981)

The efficacy of training social and problem-solving skills to learning disabled adolescents was evaluated by conducting a group skill training program with three sets of youths: (a) LD adolescents attending an alternative high school, (b) non-LD youths attending the same school, and (c) court-adjudicated youths on probation with a juvenile court. Results of behavioral role-play tests showed that all three groups of youths performed the skills at low levels prior to training. With the training of each social skill, increases were shown by each group in that social skill level. Base-line levels of the untrained skills remained stable until after training. Initial increases apparent after training generally were maintained or increased throughout the program. On the cognitive problem-solving skill, LD adolescents showed a slight gain when compared to gains for non-LD and court-adjudicated youths.

No. 31 Major Research Findings of The University of Kansas Institute for Research in Learning Disabilities--F. Clark, Editor

This report presents abstracts of all research studies conducted during Years II and III of the University of Kansas LD Institute. Issues and assumptions addressed, major findings of completed studies, and implications are presented in three areas related to LD adolescents and young adults: (a) cognitivo/ academic characteristics and setting demands, (b) intervention, and (c) social skills.

No. 32 Error Monitoring: A Learning Strategy for Improving Academic Performance of LD Adolescents--J. B. Schumaker, D. D. Deshler, S. Nolan, F. L. Clark, G. R. Alley & M. M. Warner (1981)

Error Monitoring, a learning strategy for detecting and correcting errors in written products, was taught to nine learning disabled adolescents. Students could detect and correct more errors after they received training than they had detected prior to training. Error rate in self-generated products was especially low (close to zero) after training.

No. 33 Multipass: A Learning Strategy for Improving Reading Comprehension--J. B. Schumaker, D. D. Deshler, P. Denton, G. R. Alley, F. L. Clark & M. M. Warner (1981)

Multipass, a complex learning strategy for gaining information from textbook chapters, was taught to eight learning disabled adolescents. Students learned the strategy following the institution of training and generalized their use of the strategy to grade level textbooks. Their grades on tests covering the textbook material improved after learning the strategy.

No. 34 A Comparison of Formal Features of Written Language of Learning Disabled, Low-Achieving and Achieving Secondary Students--M. R. Moran (1981)

The written language characteristics of 26 learning disabled (LD), 26 low-achieving (LA) and 26 achieving (ACH) students in grades 7 through 10 were measured using paragraph-writing and topic-sentence tasks. Findings indicated that only spelling discriminates LD students from the pool of low-achieving students demonstrating average intellectual functioning. Results further disclosed that LD students differ from achieving students on four formal features of written language.

No. 35 A Comparison of Formal Features of Oral Language of Learning Disabled, Low-Achieving and Achieving Secondary Students--M. R. Moran (1981)

The oral language skills of 20 LD, 18 low-achieving, and 20 achieving students in grades 7 through 10 were analyzed using a one-minute audiotaped discussion of general information topics. Results indicated that differences were not significant among the groups on oral language characteristics such as grammatical conventions, mean length of utterance, and selection of specific vocabulary classes. Minor differences in productivity were the only discriminating features.

No. 36 Effects of Three Conferencing Procedures on the Academic Productivity of LD and NLD Adolescents--G. O. Seabaugh & J. B. Schumaker (1981)

The effects of teacher and parent conferencing procedures on lesson completion by LD and NLD adolescents in a learning center were investigated. Following teacher conferences, students showed initial increases; however, these were not maintained. Following parent conferences, student responses showed great variability Overall, both procedures encouraged initial increases in lesson completion, but magnitude of change was minimal; neither produced generalization or maintenance effects.

No. 37 The Effects of Self-Regulation Training on the Academic Productivity of LD and NLD Adolescents--G. O. Seabaugh & J. B. Schumaker (1981)

A self-regulation package was used to teach self-control skills to 8 LD and 2 NLD adolescents in an experimental high school setting. These procedures were taught and reinforced in a series of student-teacher conferences. Results indicated that both LD and non-LD students increased the number of lessons they completed. Treatment effects were evidenced in generalizations from one academic area to another and self-initiation of increased student goals independent of a particular student-teacher conference in a few students.

No. 38 Training Junior High School LD Students to Use a Test-Taking Strategy--P. Lee & G. R. Alley (1981)

This study investigated whether or not regular classroom test scores of LD junior-high school students could be improved by training those students to use a test-taking strategy. Results showed significantly higher posttest scores for the experimental than the control subjects. Test-taking skills were found to generalize across settings and subject matter.

No. 39 The Effect of Teaching Sixth Graders with Learning Difficulties a Strategy for Solving Verbal Math Problems--E. M. Smith & G. R. Alley (1981)

In this study, subjects were taught a seven-step verbal problem-solving strategy. Results indicated an increase in percent correct on eight mathematics word problems for each subject following intervention. Baseline probes never overlapped with treatment probes indicating that generalization is possible to other students in the population studied.

No. 40 Production Deficiency vs. Processing Dysfunction: An Experimental Assessment of LD Adolescents--D. F. Mellard & G. R. Alley (1981)

This study evaluated two competing hypotheses using a discrimination learning task and varied reinforcement. LD and NLD students were administered discrimination learning problems with treatment (reinforcement, response cost) and control conditions. Processing deficits were identified in the LD students' ability to code, recode, and recall information compared to regular class students. They also benefitted less than their peers from explicit feedback. All students in the control group demonstrated overall superior performance to those in the reinforcement, response cost condition.

No. 41 Teaching Job-Seeking Skills to Learning Disabled Adolescents: An Experimental Analysis and Social Validation--R. M. Mathews & S. B. Fawcett (1981)

Skills involved in completing an employment application and resume writing were taught to three LD adolescents using a multiple-baseline design. Training was effective in teaching these skills. Rating data obtained from potential employers suggested that training was effective in improving the appearance and content of the application materials. In addition, the employers viewed applicants as better qualified for employment after training and stated that they were more likely to invite the applicants in for a job interview.

No. 42 Teaching Job-Related Social Skills to Learning Disabled Adolescents--P. L. Whang, S. B. Fawcett & R. M. Mathews (1981)

This study evaluated the effectiveness of training six job-related social skills to LD adolescents. Results showed that the learning disabled adolescents performed the skills in role-playing situations better after training than before training. Generalization measures taken at the adolescents' place of employment suggested the generality of the training effects to actual work environments.

No. 43 A Comparison of Verbal Problem-Solving in Arithmetic of LD and Non-LD Seventh Grade Males--W. M. Lee & F. G. Hudson (1981)

This study investigated differences between LD and NLD students' ability to solve verbal arithmetic problems. Twenty LD and 20 NLD seventh-grade males were asked individually to read orally and to solve one sample problem and six verbal problems. LD subjects obtained lower mean problem-solving scores and made significantly more errors than did NLD subjects in both arithmetic and oral reading. LD students were more likely to commit errors in the reasoning and miscellaneous categories. Overall, reading achievement proved to be more influential in the subjects' problem-solving skills than did IQ.

No. 44 Interactions Between Teachers and Learning Disabled and Non-Learning Disabled Adolescents--L. Powell, K. Suzuki, J. Atwater, B. Gorney-Krupsaw, & E. K. Morris (1981)

In this study, an observational system was used to examine interactions of LD and non-LD students and their teachers. The students' perceptions of their classroom interactions were also assessed. No significant differences between LD student-teacher and NLD student-teacher interactions were observed. LD and NLD students exhibited similar perceptions of their interactions with their teachers.

No. 45 Improving Social Interactions Between Learning Disabled Adolescents and Teachers: A Child Effects Approach--B. Gorney-Krupsaw, J. Atwater, L. Powell, & E. K. Morris (1981)

This study investigated whether LD adolescents could be taught to change their classroom behavior in ways that would effect how their teachers treated them and whether they could be taught to generalize positive changes in their interactions with teachers. Six LD junior high students were taught three social skills: initiating positive interactions, responding to requests, and recruiting attention for individual help. The students were successful in learning the social skills in the training session; however, they did not exhibit these skills on a consistent basis in their classroom. Teachers perceived the subjects' classroom behavior as more appropriate.

No. 46 The Relationship Between Learning Disabilities and Juvenile Delinquency: A Link Based on Family and School--S. O. Stanley & F. G. Hudson (1981)

This study investigated the relationship between learning disabilities and juvenile delinquency with regard to the environmental factors of family and school. Subjects were 90 student-inmates from a correction facility (23 LD, 15 JD, 47 LD/JD, and 5 "normal"). The variables characterizing the LD and JD groups were similar among groups and provided the basis for a LD/JD relationship.

No. 47 Teaching Self-Control Procedures to Learning Disabled Youths--C. Foster, C. Dennis, & J. Maxwell (1981)

This study developed and evaluated a self-instructional booklet that teaches adolescents to change their behaviors with minimal intervention from other individuals. The subjects, to varying degrees, learned the principles of self-control and applied the principles to their own behaviors. The application of the self-control procedures produced inconsistent results both within and across subjects.

No. 48 Implementing Goal Setting Activities with LD Adolescents--N. Tollefson, D. B. Tracy, E. P. Johnsen, M. Buenning, & A. Farmer (1981)

In this study, LD adolescents were taught to set realistic goals, to expend effort to achieve the goals, and to accept responsibility for achieving or failing to achieve their goals. The intervention produced a significant increase in the number of students exhibiting realistic goal setting strategies. During training, LD students produced a significantly greater number of effort attributions than ability; task difficulty, or luck attributions. The treatment group also increased internal attributions.

No. 49 Teaching Learning Disabled Junior High Students to Use Visual Imagery as a Strategy for Facilitating Recall of Reading Passages--M. M. Warner & G. R. Alley (1981)

This study investigated whether recall of prose passages by LD students could be improved by training those students to use visual imagery when they read. Students in an imagery training group received 30 minutes of instruction in the use of visual imagery while students in a paraphrase-recall practice group received 30 minutes of practice in reading passages and telling, in their own words, the content of those passages. Students trained to use visual imagery did not exhibit improved paraphrase-recall relative to the practice group. However, trends within the data suggested that imagery training with LD students should be investigated further.

No. 50 A Comparison of Five Discrepancy Criteria for Determining Learning Disabilities in Secondary School Populations--M. M. Warner (1981)

Two groups of students were identified in grades 7 through 12--a school-defined learning disabled group and a group of low-achieving students who were not receiving special education services. Five operational definitions of discrepancy were applied using test information obtained from the two groups to determine the correspondence between the existing classification of the students and classifications based on each of the five discrepancy criteria. Two criteria were found to be the most consistent with current public school practice in selecting LD students. However, a substantial proportion of low-achieving students met these two LD criteria.

No. 51 Visual Imagery and Self-Questioning: Strategies to Improve Comprehension of Written Material--F. L. Clark, M. M. Warner, G. R. Alley, D. D. Deshler, J. B. Schumaker, A. F. Vetter, & S. M. Nolan (1981)

Two learning strategies, visual imagery and self-questioning, designed to increase reading comprehension were taught to six learning disabled students using a multiple-baseline across strategies design. Results of the study indicate that LD students can learn the two strategies and can apply them in both reading-ability level and grade-level materials. The students' use of the strategies resulted in greater comprehension scores from the pretest in baseline to the posttest after training. Instructional time for each strategy ranged from five to seven hours.

No. 52 Effects of Teaching a Questioning Strategy on Reading Comprehension of Learning Disabled Adolescents--G. R. Alley & A. K. O. Hori (1981)

Nine junior high learning disabled students received a Questioning Treatment and an equivalent Control Group received traditional reading training. The results of this study confirmed the hypothesis that training a questioning strategy is an effective method to increase reading comprehension performance as measured by a formal reading test. No significant relationship was found between questioning frequency levels and reading comprehension performance, and no significant interaction occurred between training conditions and questioning frequency levels.

No. 53 Performance and Competence of Learning Disabled and High-Achieving High School Students on Essential Cognitive Skills--S. A. Carlson & G. R. Alley (1981)

This study was designed to measure performance differences of learning disabled and high-achieving high school students judged crucial to academic learning and to determine teacher performance standards on those same crucial learning skills. Results showed that high achievers performed significantly better than LD students across the complex, and within every domain, of learning skills assessed. In addition, significantly greater proportions of LD students fall below teacher-derived standards of minimal competence in all skill areas assessed than do high-achieving students.

RESEARCH MONOGRAPHS

No. 1 Studying the Learning Disabled Adolescent Through Epidemiological and Intervention Research Tactics--R. Altman (1980)

This paper examines the relationship between epidemiological and intervention research with learning disabled adolescents. Several historical trends and contemporary issues which effect research in learning disabilities are discussed. With this background, Dr. Altman advocates the simultaneous and interactive pursuit of epidemiology and intervention research.

No. 2 An Approach for the Design and Implementation of Nonacademic Interventions with LD Adolescents--R. Altman (1980)

This paper presents an alternative approach to research in learning disabilities among adolescents and young adults. The author proposes that adolescents labeled "learning disabled" can and should play a role in research efforts in which they are involved. While much research focuses on educational interventions following basic research formats, research described in this paper would focus on psychosocial concerns within a largely natural or nonartifical context.

No. 3 A Model for Conducting Research with Learning Disabled Adolescents and Young Adults--E. L. Meyen, R. L. Schiefelbusch, D. D. Deshler, G. R. Alley, J. B. Schumaker, & F. L. Clark (1980)

Issues from the field of learning disabilities and the field of education in general which impact the LD individual are discussed as they relate to research with LD adolescents and young adults. Based on this knowledge of the context in which the LD adolescent is required to function, a research model that allows a commitment to programmatic research leading to the validation of interventions as well as the generation and investigation of new research questions is presented. Critical questions within the three research areas of the Institute -- epidemiology, intervention, and generalization -- are discussed as they relate to this research model.

No. 4 Instructional Practices that Promote Acquisition and Generalization of Skills by Learning Disabled Adolescents--D. D. Deshler, G. R. Alley, M. M. Warner, & J. B. Schumaker (1980)

The authors identify procedures to promote acquisition and generalization of skills. Exemplified within a learning strategies model, the procedures outlined here stress acquisition of specific strategies through learning it in isolation and then applying it to controlled materials. Specific procedures to promote generalization across settings and over time are identified and described.

No. 5 Assumptions and Strategies for Conducting Research with Learning Disabled Adolescents and Young Adults--E. L. Meyen, R. L. Schiefelbusch, D. D. Deshler, G. R. Alley, M. R. Moran, & F. L. Clark (1980)

This paper details assumptions about learning disabled adolescents and young adults as well as assumptions about conducting research with this population held by researchers at the Kansas Institute. Strategies developed to facilitate the development and implementation of programmatic, institutional research are presented. The relationship among the research assumptions, goals and objectives, and strategies is an interactive process with each contributing to the development of and also evolving from the others.

No. 6 A Research Strategy for Studying Learning Disabled Adolescents and Young Adults--J. B. Schumaker, G. R. Alley, M. M. Warner, & D. D. Deshler (1980)

Unique problems related to adolescents and young adults which researchers must consider in designing interventions for LD populations are discussed. These unique factors associated with the condition of learning disabilities in adolescents and young adults require the development of a comprehensive and systematic research strategy. The authors present an argument for an epidemiology data base as a research strategy. In addition, a brief synopsis of major findings from the IRLD's epidemiology research on LD adolescents and young adults is presented.

No. 7 Career Preparation for Handicapped Adolescents: A Matter of Appropriate Education--G. M. Clark (1980). Published in Exceptional Education Quarterly, 1980, I (2).

A complete individualization concept is presented as the avenue to achieve "appropriate education": for handicapped adolescents. Exemplified within the context of the educational goal of career preparation, this concept involves the individualization of both content and instructional approach. The need for career preparation is supported by data which suggest that high school youth lack critical information in the areas of occupational development, daily living skills, and personal-social skills important to one's functioning in today's society.

No. 8 A Response to Evolving Practice in Assessment and Intervention for Mildly Handicapped Adolescents--E. L. Meyen & D. H. Lehr (1980). Published in Exceptional Education Quarterly, 1980, I (2).

This paper examines the developmental history of programs for mildly handicapped retarded and learning disabled adolescents. Curriculum/instructional alternatives are discussed and a rationale presented for consideration of a student's educational history when making instructional decisions. This rationale is predicated on the perspective that many mildly handicapped students have not been subjected to intensive instruction and options for the implementation of such instruction are presented.

No. 9 Research Approaches to Studying the Link Between Learning Disabilities and Juvenile Delinquency--J. S. Hazel, J. B. Schumaker, & D. D. Deshler (1980). Submitted for publication.

A relationship between learning disabilities and juvenile delinquency has been hypothesized; however, research on this relationship has been clouded with methodological difficulties. These problems include the definitions of learning disabilities and juvenile delinquency, the use of appropriate experimental designs, and the difficulty of obtaining informed consent in the court system. A current study through The University of Kansas IRLD which is intervening with learning disabled youth in the juvenile court is described. Finally, key questions in the field are proposed with suggestions for future research.

No. 10 Bayesian Screening Procedure for Identification of Learning Disabled Adolescents: Administration, Scoring, and Interpretation--G. R. Alley, D. D. Deshler, & M. M. Warner (1981)

The Secondary Learning Disabilities Form of the Bayesian Screening Procedure is described, and procedures for administration and scoring are detailed. In addition, interpretation guidelines are presented. Both the Revised Checklist of Academic Problems (Teacher Checklist) and the Self-Rating Student Checklist are discussed.